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I, JULIE BILLINGSLEY, TEAM LEADER EXAMINATION SUPPORT AND  
SALES hereby certify that annexed is a true copy of the Provisional specification  
in connection with Application No. 2003903079 for a patent by DANIEL  
CHARLES UNDERWOOD as filed on 19 June 2003.



WITNESS my hand this  
First day of July 2004

JULIE BILLINGSLEY  
TEAM LEADER EXAMINATION  
SUPPORT AND SALES

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DANIEL CHARLES UNDERWOOD

FORM 9

COMMONWEALTH OF AUSTRALIA

Patents Act 1990

PROVISIONAL SPECIFICATION FOR THE INVENTION ENTITLED:

"A BAR CONNECTOR ASSEMBLY"

This invention is described in the following statement:

## A BAR CONNECTOR ASSEMBLY

### FIELD OF THE INVENTION

THIS INVENTION relates to a bar connector assembly and in particular but not limited to a bar connector assembly used to couple or connect U-shaped ends of adjacent reinforcing bars and preferably couple them in a common plane.

### OUTLINE OF THE INVENTION

In one aspect, the present invention resides in a bar connector assembly comprising a body having a bar seat section and a bar retainer moveable relative to the seat section to enable entry of a bar into the assembly, the seat section being adapted to receive and position a second bar relative to an adjacent bar connected to the assembly, the retainer being moveable between a first position allowing the second bar to be placed on the seat section and a second position to block removal of the second bar from the assembly.

Typically the bar connector assembly enables connection of bars to the assembly so that bars extend from the connector in different connections.

Preferably, the seat section comprises a channel into which a curved section of bar is positioned, the channel having an upstanding land filling an arc of the bar so that upon a load being applied to the bar in tension, the land section aids in retaining the bar in position and inhibits its deformation.

The retainer typically comprises an edgewise slidable member able to slide into the body after the bar has been inserted, the bar in combination with the seat section and the retainer serving to secure the retainer and thereby the bar in position in the seat section.

Preferably the assembly is symmetrical so that two identically shaped curved bars are connected together by the assembly with the bars so connected together occupying a common plane. The bars are typically U-shaped ends of projecting rebars of known type.

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#### BRIEF DESCRIPTION OF THE DRAWINGS

In order that the present invention can be more readily understood and put into practical effect, reference will now be made to the accompanying drawings which illustrate a preferred embodiment of the invention and wherein:-

Figure 1 is a side view of a coupler according to the present invention;

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Figure 2 is a section through A-A of Figure 1;

Figures 3 and 4 are exploded views; and

Figures 5 and 6 are assembled views from opposite sides.

#### DETAILED DESCRIPTION OF THE DRAWINGS

Referring to the drawings and initially to Figures 1 and 2, there is illustrated  
15 a coupler 10 and a U-shaped section of reinforcing bar 11 secured within the coupler. It will be appreciated that the reinforcing bar 11 does not constitute part of the present invention. The coupler 10 is symmetrical so that a corresponding reinforcing bar 11 may be located in the opposite side of the coupler as will be described below. The reinforcing bar has been omitted from the opposite side so  
20 that the features of the opposite side may be illustrated more clearly, it being appreciated that the coupler is symmetrical about the axial line 12.

The dimensions illustrated in Figures 1 and 2 are in millimetres.

The coupling includes a seat section 13 and a retainer section 14. The seat section 13 includes a opposed D-shaped lands 15 and 16 defining thereabout channels 17 and 18 into which the curved sections 19 of reinforcing bars 11 can be located and positioned, the retainer 14 includes a T-shaped projection 20 that extends transverse straight across the coupling as can clearly be seen by the hatch section in Figure 2.

The seat section and the retainer section are cast iron selected according to appropriate loading as would be desirable in a concrete floor or wall construction or any application where the coupler may be used according to engineering specifications. Thus, the loops 11 would typically project from a concrete wall construction or floor construction and be connected to reinforcing in an adjacent structure using the coupler 10. Since the retainer is located in position by a transverse sliding action the relative dimensions of the body, the retainer and the bar may be selected so that the retainer may be driven into position and it is only the very tangential engagement which retains the retainer in a secured position against the loop section 19.

It will be appreciated that the present invention essentially resides in one half of the coupling and it may be preferable to have a loop bar in some circumstances of the type illustrated at 11 coupled to a single bar threadedly inserted into the coupler. It will be appreciated that this can be accomplished with bars in the same plane by slight modification of the seat to extend and for the retainer on the opposite side to extend to accommodate a threading of the seat section so that the single bar and the loop 11 are located in the same plane. In this

arrangement of course, the coupler will lose its symmetry. This is one example of a modification that would be apparent to those skilled in the art without departing from the broad ambit and scope of the invention as herein set forth. Another variation might be to create a retainer which projects where the T-section is straight and projects through an opening in the seat section and is retained in place by a suitable wedge. The disadvantage with this arrangement, of course, is that it involves extra parts.

Whilst the above has been given by way of illustrative example of the present invention many variations and modifications thereto will be apparent to those skilled in the art without departing from the broad ambit and scope of the invention as herein set forth.

DATED this 19th day of June, 2003.

DANIEL CHARLES UNDERWOOD  
By his Patent Attorneys  
INTELLEPRO

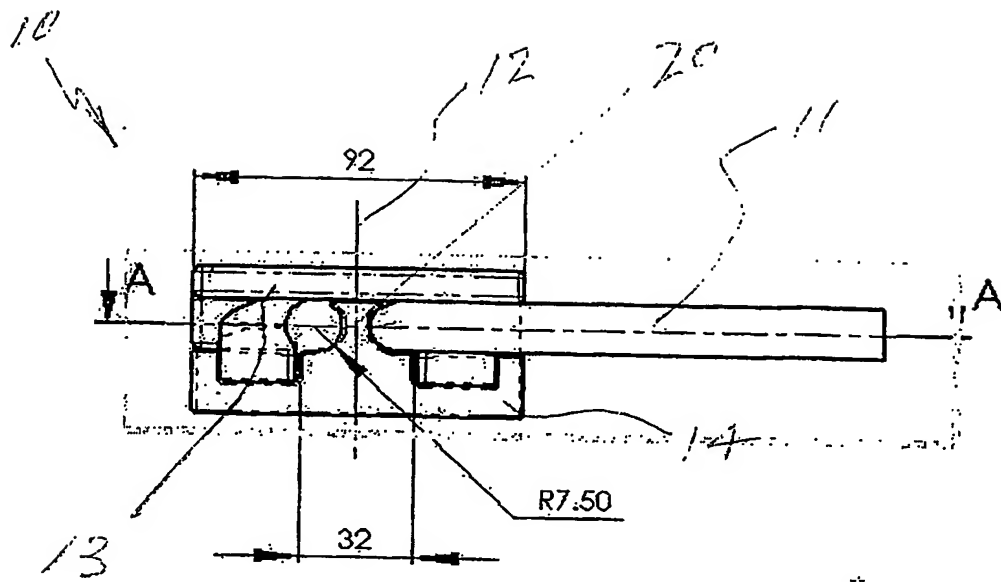


FIG. 1

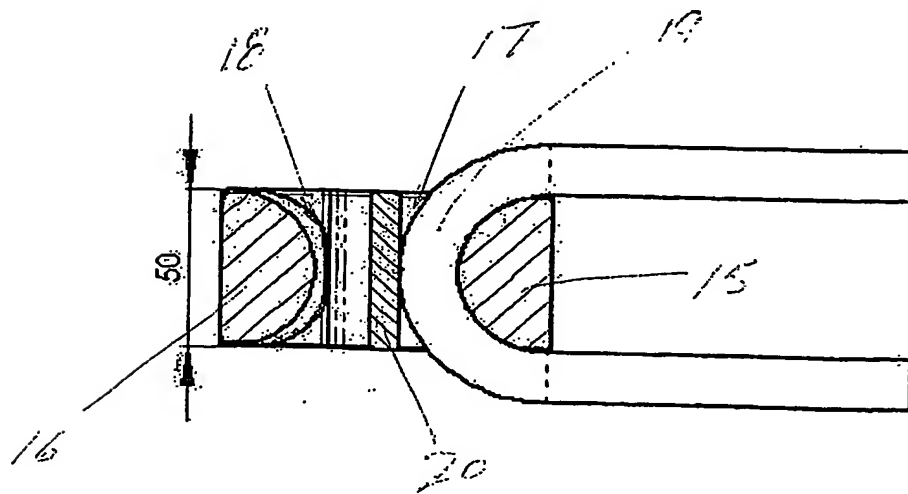


FIG. 2

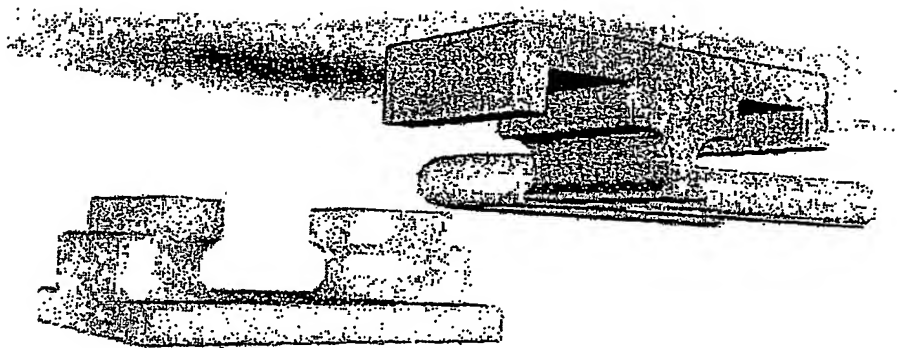


FIG 3

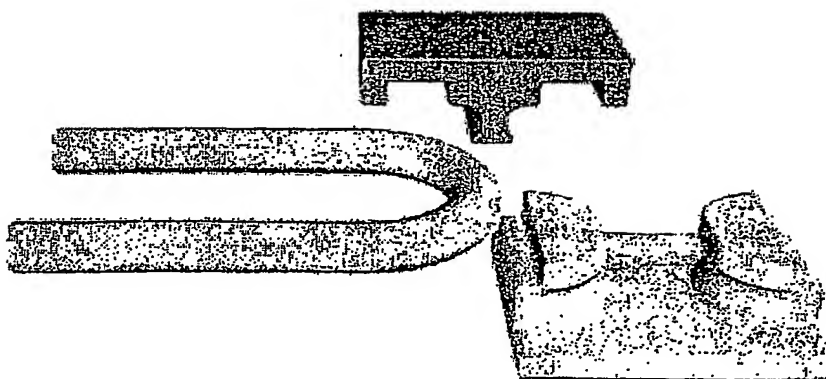


FIG 4



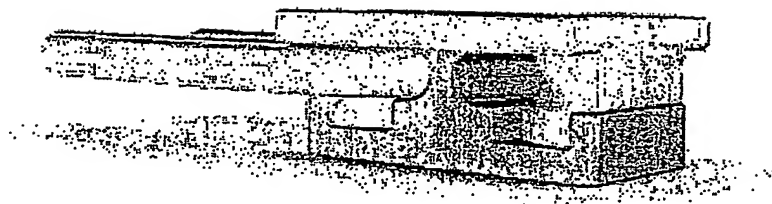


FIG. 5

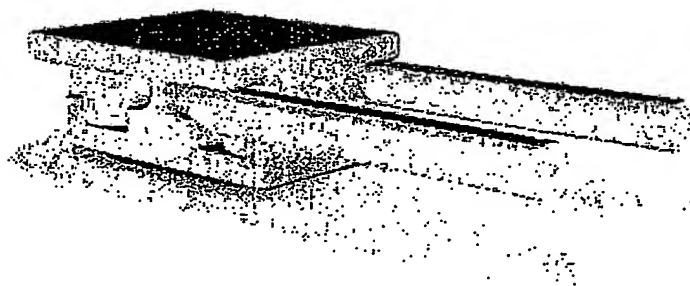


FIG. 6

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